SEQUENCE LISTING

SEQ ID NO: 1 (MOUSE GCR1/FRAGILIS NUCLEIC ACID)

Mouse GCR1 (Fragilis) full length nucleotide sequence

GCCGCAGAAAGGGCAGACCCGCAGCGCGCTCCATCCTTTGCCCTCCAGTGCTGCCTTTGCTCCGCA
CCATGAACCACACTTCTCAAGCCTTCATCACCGCTGCCAGTGGAGGACAGCCCCCAAACTACGAAA
GAATCAAGGAAGAATATGAGGTGGCTGAGATGGGGGCACCGCACGGATCGGCTTCTGTCAGAACTA
CTGTGATCAACATGCCCAGAGAGGTGTCGGTGCCTGACCATGTGGTCTGGTCCCTGTTCAATACAC
TCTTCATGAACTTCTGCTGCCTGGGCTTCATAGCCTATGCCTACTCCGTGAAGTCTAGGGATCGGA
AGATGGTGGGTGATGTGACTGGAGCCCAGGCCTACGCCTCCACTGCTAAGTGCCTGAACATCAGCA
CCTTGGTCCTCAGCATCCTGATGGTTGTTATCACCATTGTTAGTGTCATCATCATTGTTCTTAACG
CTCAAAACCTTCACACTTAATAGAGGATTCCGACTTCCGGTCCTGAAGTGCTTCACCCTCCGCAGC
TGCGTCCCTCCTTGCCCCTCCCTACACGCAGGTGTAACACTCATTTATCTATCCACAGTGGATTCA
ATAAAGTGCACTTGATAACCACC

SEQ ID NO: 2 (MOUSE GCR1/FRAGILIS AMINO ACID)

Mouse GCR1 (Fragilis) amino acid sequence

MNHTSQAFITAASGGQPPNYERIKEEYEVAEMGAPHGSASVRTTVINMPREVSVPDHVVWSLFNTL
FMNFCCLGFIAYAYSVKSRDRKMVGDVTGAQAYASTAKCLNISTLVLSILMVVITIVSVIIIVLNA
QNLHT

SEQ ID NO: 3 (MOUSE GCR2/STELLA NUCLEIC ACID)

Mouse GCR2 (Stella) full length nucleotide sequence

GGATCACAGACTGACTGCTAATTGGGTCTTGGTTTTAGGTCTTTTCAAAGACTAAGCAATCTTGTT
CCGAGCTAGCTTTTGAGGCTTCTGCCCATCGCATCGCCATGGAGGAACCATCAGAGAAAGTCGACC
CAATGAAGGACCCTGAAACTCCTCAGAAGAAAGATGAAGAGGACGCTTTGGATGATACAGACGTCC
TACAACCAGAAACACTAGTAAAGGTCATGAAAAAGCTAACCCTAAACCCCGGTGTCAAGCGGTCCG
CACGCCGGCGCAGTCTACGGAACCGCATTGCAGCCGTACCTGTGGAGAACAAGAGTGAAAAAATCC
GGAGGGAAGTTCAAAGCGCCTTTCCCAAGAGAAGGGTCCGCACTTTGTTGTCGGTGCTGAAAGACC
CTATAGCAAAGATGAGAAGACTTGTTCGGATTGAGCAGAGACAAAAAAGGCTCGAAGGAAATGAGT
TTGAACGGGACAGTGAGCCATTCAGATGTCTCTGCACTTTCTGCCATTATCAAAGATGGGATCCCT
CTGAGAATGCGAAAATCGGGAAGAATTAGGAGCTTACATTGTACGCTGCCCTGGCTGTCGACGATG
CCGCACAGCAGATGTGAAAGCTATTTTTTGTTTAAGATTAAACTTTTTCTGGTGCTGGGAAATCTT
AACTTGTTAACCTTTAAATTGTAGATAGGATGCACAACGATCCAGATTTATGTGAAGTTTAGAAGC
CTCAAGCTGTGAGGCCCAGGGCTGAGGAATAAAGTAAATAGAATTTGGAGTATGTACGTTCTAATT
TCCAGAAATTTGTAATAAAAGCATTTTTGTT

SEQ ID NO: 4 (MOUSE GCR2/STELLA AMINO ACID)

Mouse GCR2 (Stella) amino acid sequence

MEEPSEKVDPMKDPETPQKKDEEDALDDTDVLQPETLVKVMKKLTLNPGVKRSARRRSLRNRIAAV
PVENKSEKIRREVQSAFPKRRVRTLLSVLKDPIAKMRRLVRIEQRQKRLEGNEFERDSEPFRCLCT
FCHYQRWDPSENAKIGKN

SEQ ID NO: 5 (RAT GCR2 HOMOLOGUE NUCLEIC ACID)

Rat GCR2 (Stella) homologue genomic sequence; similar intron-exon structure as mouse-Stella. AC094826 contig No.5 (22671 - 27595: contig of 4925 bp in length)

CCCCCCCCCCCCCCCCCCCCCTCCCCCCCCCCCCCACCTCCGACGTATGATGGCTCCTAGACGCAA
CACGAAGCGGACTCCCCGCATCATTCACGTAGACCCGCCTTCTGCTTTCCCTGTCGGGGTTTTGGG
AAGCCCGGCGGCCCTCTCTTCTCACCTTGCTCCACTAGCACGCGGCTGTTTTCACTGAGCCCAGCA
CTGGCTAAGTGGAGCACCAGGAGTTTCAGGCTATCCTTCAGAGGGCAAGGTGTAGTCCATGGTGGG
CTACAGGAGACCCTCTCTCTCCGTGAGTACAGAGAGGCAAACCCAAGCCAGACAGGGGTGATGATT
AGGAACATACCTTCGTCGGGGAGAAAATACCGGTTCATATAGGAATAAGAGGAACCAGGAGGTAGT
TAAGGCTGTGGTGTCTGGTTGCGGGGTTTTTGACTCTCAACAACCACGTTCAGAACGTGCTGAGTT
TTTATGATGGTGTAGAATTTCCTTATCAGCAATTGGTCTCCGCGGTGTTTCTTTTTCTTTTTTAAT
TTTTTAAGTATAATTTGGTGTTTGAAGCAACTGTACTTGGACTAGAACTCCCTGTGTAATCCAGAA
TGGAATCCCAAATCCTAGGATTAAAGGTTTTAGTGGGCTGCAGTGTTGGGTGGGGGTTGTTTTGAT
TACGTTGTAGCCCAGGCTGGGCTCAATCTCAATCCTCCTGCCTCTGCCTTCTAAACGCTAGGATTA
AAAGTGCTGCGCCATGATCCTGCTGTAGCTTTATTTTTATTTATTTATTTATTTTGGCTCTT
TTTTTTTGGAGCTGGGGACCGAACCGAGGGCCTTGTGCTTCCTAGGCAAGCGCTCTACCACTGAGC
TAAATCCCCAACCCCAGTGTAGCTTTATTTTTAAGAACAGGAGTCTTGTTTCTCAAAACAGTTTCT
CTGTAGCCCTGGTTGTCCTGGAACTCCGTAAACCAGGCTGGTTTGGGACTCTGCCTTTAAAACACT
GGGACTAAAGGCGGTACCACCTCCGTGGGCTACACCGGAATCTTTTAAGCTTCATTTGAACCGGGG
CTTTTTCTTTTTCTCACCCACTTTCTGGAAGCGATTTTCCTGCTAAATTTCCATTCCTGGTAAATG
ACTCTGAGGGGAAATAGGAACCCAGAATAGATTGAGCCGGGGGCTACCTGGGACCCCGCACTCCCC
ACCCCCCAGCCGCTGTTGAAGCTCTTTGCCTGAGGGGCCTCCGGGTTTGATACCTCCTAGCACTCC
GGGCTGAGGGCGTGGCTCGGGAGGAGCCATTCCTTTGGAGAGGAAAACAACTGCTGGCCTTGAATC
TGCCCTAATACCTGACAGTTACATGGGACCTCCTTATTTCCACAGGATTCTTTAGTCTTTGTTTGG
GAGATTTTCAAATCTTGAGACTGCTCAACCCTTCCTGGCCTAACACTCACAAGGCCAGGCTAGACC
CAAATTCTGTCAACCCCTTCTGTGTCCAAAACGGTGGGTGGCTAGCTGGCTCACCCTTGGTGTCAC
TTTGCTTTAACATTCGGAAAAGTTGTGGTAAGTTTCCTGTATAAAATAGGACCATCTACTGGGTGT
GGTCCCATGTAAAGCAAGGTTGGTTTCCCAAAATACCCTGTTTACATAGATGTCCGGAAGCATTGG
AGCAGGTCAATTAGATTTAGGTGGAAACAGCCTGTTTTTGGAAAGCTTTCCAGGGCGGAAAATGAA
CCCAGAGGCACTATTGGGCAAGCCCTCCGGCTAAGCAACACAATTGGCTGCAGGGGTCTCTGGAAG
AGGTGTGAGACAAGAGAGAATATGCAGGTTTCAGGACCTCTGAACTAGAGTTAGGCTGCTGTAACA
TTGTAACATTGCTGTAAGCAGAACAGCCCATGGTAAGAAGCTCAGTGGATCTCTACAAACACTAGG
ATATCTGCTCAGGGTTTATGACCAGGCCCTGTGCATATGGTTTGCTTCTTGTTGGCCCCTCTCTTG
AAGAGGGGTGATTATCTGTTACCCACTTCCTTGTTTCTCTGGGGTATTACCTTGCAAAATGCAAAA
TGATATACTTCACTAATGTCTCCATCTTCTGTTTCAGAAATCCTACAACCAGAAACACTAGTAAAG
GTCATGAAAAAGCTAACCCTGAACCCCAGTGCCAAGCCGACAAAATATCATCGTCGTCAAAGGGTT
CGTCTCCAGGTTAAGAGCCAGCCTGTGGAGAACAGAAGTGAAAGAATCATGAGGGAAGTTCAAAGC

GCCTTTCCCAGGAGAAGGGTCCGCACTCTGTTGTCCGTGCTGAAAGACCCCATAGCAAGGATGAGA
AGATTTGTTCGGGTGAGTTGCGTTTGTGGGCGGGGCATAGATCTAAGAGCAACTCTAGCCTCAGGA
ATGGCACCTAGGTTAAACAGGGAATGTAGACAAGGATAGTGACTACCTGTGATTCCCAGCTCAAGA
AAACAAGCTCCAAGGCTATCCTCTACTGCGCAGTCTGAAGCTGGCCAGAGCTATATGCAAATTGAT
AAGTCAGTATAACATTTATTTTTGGATTTTCAGACTCCCTCCCCATAGTCCAAACTGGCCCTCCAG
TTCAGTCCACGGTCCTGCTTCTTCCCCGGTGCTAGGCTTTTGAGTGATAAGGCTGACTTAGACTGG
ATCTCAGAGCTGAAGTGGACCTGTTAGTCTTTGTAGACCAGGCTGGGGTGGTTTCTGCTTTCTCAG
CGCCTAGCTCACATAGTAGGCATTTTAACTTTGTCTTAATAGTAATTTGAGTAATTTTGTTTTTCT
CTTGAAGATTGAGCAGAGACAAAGACAGCTTGAAGGAAATGAGGTAAATGCATATGGATGGGTAGG
GTGTCTATGGATGGGTAGGGTGTCTTGTTTTTACTGTTTCCTTAGACAAGGAGTGTGTATGTGGAG
AGTTACCTTCTCAACACAGGGAATCTGGTTATTAAAGCAGTACTTTAAAAATAAATAAAATAAATA
AAATAAAAATAAAGCAGTAGAAGGGGATTTACATTTCTTTTGAGTTGCAATATCCTGATTAACATT
TTTCTTTCAGAGACGAGATGAGCCATTCAGATGTCTCTGCACTTTCTGCCATTATCAGAGATGGGA
TCCTTCTGAGAATGCTAAAATCGGGCAGAACCAGAAGAATTAGGGCAGTTTGAATTGTACACCGTC
CTTGCCGTTAACGGTGCCATGCAGCAGATGTGAAAGCTGTTTTTTTGTTTAAGATTAAACTTTTCT
TGGTGCTGGGGAAATCTCTTCTAATTGCTAACCTTTAAATTATATAGGATGTGTGACATTTGGATT
CATGGGAATGACAGATTTACCCAAGAATTGAGCATGAGTCAAAGCCTGGTAGTTTGATTTAGAAGG
TAATTGGAATAAATCTTTTTATTTTAGATTTTCTAGTTTGCAGAGAAATTTGTAATAAAGGCAAAT
TTGTTATCTTTAATAAATACAGAACAGATTAGAATGAGCCATTGGAGATGGGGGACTCGTTTTTTA
CAGGTGCATGTGTGGGTGTGTGATGTTCAGAGTTCAATGTGTGCTACCCTGTATTTCTGCTTGAGG
CAAGGTCTCCATGAGGCCTAGCTGGTCTAACTCCTGGTCCTGCCTTTTGTTTTCCCCTGAGTTTTG
ACACCATAGGCTTGTCGGCAAGATCTGGAAGAGGCTTGATGTTTGTGTTTGTGCTGTGTAATAAAC
AATTGGTTGACATATTCCTAAAGTGTGGCACTGTATTGACCTGTCTGTCTCATGAGGAAGTTAATG
ACCGGAGCATAATTGTATGCTTTATTTCCTGAGAGAAGTGTCAGGAAAGGAGGAGTTAGGAAGAAA
GCCCCAGGCTGGGGTTAAGAGCACTGGCTGCTTTTCCAGAGGTCCTGAGTTCAATTCCCAGCAATC
ACCTGGTGGCTCCCGAACATCTGTAACAGGATCCAATGCCCTCTTTTGGTGTGTCTAAGAACTCCC
TAGGCATGCAGAGGATTTTTGTTTTTGTTTTTTTTTTTTTTTTTTTTTTTTTCGTTTTTTTCAGAG
CTGGGGAACCGAACCCAGGGCCTTGCGCTTGCTAAGCAAGCGCTCTACCACTGAGCTAAATCCCCA
ACCCCTACAATGGCCTTTTTCTACCTGCTTTTGAATTATCAATAAAAGACTGGGGCAAAAGAAAGG
CTGGAGTGAATGAGAGAGAACATGTGAAGAGTAAATGAGAGAGAGCATGAGGGAATGAATGAGAGA
GTGAATGTGAGAACGAATGTGAGAGCGAGTGAGAGAACATGAGAAGAACACGTTAAGAGTGAGTGA
AGAGAGAATGTGAGGTGTGTATGAAGATTGTGTGTGGGGTTGGGGATTTAGCTCAGTGGTAGAGTG
CTTGCCTAGGAAGCACAAGGCCCTGGGTTCGGTCCCCAGCTCCAAAAAAAAGACCCAAAAAAAAAA
AAAAAAAAAAAGATTGTGTGTGTGTGTGAAAGGAGAGTGCATGTGGTGTGTGTGAGATATGTGCAA
GGTGTGTATCAAGAGTGTGTGTGAGAGTGAAAGGGTAATGAACAGAGGTGTGCATGAGCGTGGGAG
TTTGAGAAAAGAAAACAGCAATAAAAAAAAAAGCAGAGTGCACGAGAGAATGCAGAGTGTGTGCAA
CCTCAAGCTGAGACAGAGACAGAGAGAAAGAGAGAGAGAGAGAGACTTTAAGCCTTGAAATTAC
CTGTCAGTTTGTACCCAAATAGTAGTCTGTGTATATTTATTTTGAGCCTTCCAGATCCCTGCTTCC
AGTGGAGAACTCTGATTCTATGTTGAGGCTGGACCCTGGCAATAGTGGGCTTCTTGAAAAATAGTC
AAAGGAAACAGTGCTACACCATGGACTTAAGCCTTTAGACTCAGTTCTGGCTTCAAGAGCAGCTGT
CAGAAAATAAGTGATGAACTACTTGCAGTCGAACTCGAATC

SEQ ID NO: 6 (RAT GCR2 HOMOLOGUE NUCLEIC ACID)

Rat GCR2 (Stella) homologue genomic sequence; different intron-exon structure from mouse-Stella (fused exons). AC097234 (131006 132449: contig of 1444 bp in length)

CCAGGATTCAGACGAGCTAGGCCTCATGCATGGAGACCTTGCCTCAAGCAGAAATAAACAGGGTAG
CACACATTGAACTCTGAACATCACGAGTGTGCACACACCCACACATGCATCTGTAAAAAACGAGTC
CCCATCTCCAATGGCTCGTTCTAATCTGTTCTGTGTATTTATTAAAGATAACAAATTTGCCTCTAT
TACAAATTTCTCTGCAAACTAGAAAATCTAAAATAAAAGATCTATTCCAATTACCTTCTAAATCAA
ACTACCGGGCTTTGACTCATGCTCAATTCTTGGGTAAATCTGTCATTCCCATGAATCCAAATGTCA
CACATCCTATATAATTTAAAGGTTAGCAAGTAGAGATTTCCCCAGCACCAAGAAAAGTTTAATCTT
AAACAAAAAAACAGCTTTCACATCTGCTGCATGGCACCGTTAACGGCAAGGACAGTGTATGATTCA
AACTGCCCTAATTCTTCTGGTTCTGCCCAATTTTAGCATTCTCAGAAGGATCCCATCTCTGATAAT
GGCAGAAAGTACAGAGACATCTGAATGGCTCAACTCTTCTCTCATTTCCTTCAAGCTGTCTTTGTC
TCTGCTCAATCCGAACAAATCTTCTCATCCTTGCTATGGGGTCTTTCAGCACCGACAACAGTGTGC
GGACCCTTCTCTTGGGAAAGGCGCTTTGAACTCCCCTCATGATTCTTTCACTTCTGTTCTCCACAG
GCTGGCTCTTAATCTGGAGACGAACCCTTTGACGAAGATGATATTTTGGCCGATTGAGATAGAATA
TCAAAACAACATTTAACATTTAAATAACTTAACGATATACACACCTTTTTTTTTTCCACCTCCCCA
CACAGACAAAAAACAACCCTATTTTTTCTTTACAACCCCGCCTAAGCAAGCGAAGCATTAGTAACT
GACCAATCATAGAAAGGAAACACCACCAGACCACATCAAATAAAATAAAATCACCGCCCAACCCCA
CCCCTATAAAAAACCCGCCGACCACACCACATATACTCCCCCCCCCCCGCACCATCACTACATCAC
CCTCTCCACCCATTCCCACCTCCCCCCCCAACATTAACCCCACCCCATCACGGAAACCCCCAACAC
CAACAAATAAATTAGACACATCGCATTACATAAATTGACACAAGACCCACCCCAAAAGAGCAGCAA
AGATTAGAGCCACATCCTCGGCCCAACACAATACACTCAACCTGCATAGTATCTATCTCCACCCCA
ACCTAGAAACAAAAATCTAATCAGCACCAGGCACCCAAGTATCACGCACACTCAAAAACATACCCA
CCAATTAAACACGCCCCACCCACCCAACAACCCACCCGCCTGACAACACACTTCGGAACTACCCTC
AACATCACCAAAAGCAATCGCAAGTTACGATGACTCCAACCACCTCACTCTCTCATTG

SEQ ID NO: 7 (RAT GCR2 HOMOLOGUE NUCLEIC ACID)

Rat GCR2 (Stella) homologue genomic sequence; different intron-exon structure from mouse-Stella (fused exons). AC093991 (1 - 7657: contig of 7657 bp in length)

ACTGCAAGTAGTTCATCATTTACAGATCAAAAGAAAGAAGAATAAAAAAACAAGGTGTCATGATCC
CTCCAAAAGAGTGGAACACTTCAACTGCCAGATCCAAGATACTGAAATGGGTAGCATGCTGGAGAA
AGAATTCAAAAGTTAGGTAGAGAATCTGGTTGAGCAGAGCACTTGCTTTTCTTCCAGAGGATCTGA
GTTCAAGTCCCAGGACCTATATCACAGTTTTCTGTAACTCTAGCTCCAGAGGGTCTGACACTTCTG
TTCACTGTGGGCACCTGCATTCACAGACAAACATAAAGTAGTTCATCACCCTTTTCACAGAAAACC
CACAGCATGTGAGGAAATCCGGGTCTCTGCGCAATGCCCCCACAGCAGAAGGGGGGAGCTGGAGAG
ATGGTTCATCTGTTAGCCCATTTATTGCTCTTGAAGAGAACCCAGGGTCATCCATAGCACCCATAG
CAGCTCACAACCATCTCCAGTTCCAGGAGATCCAATGCCCTGTTGTGACCTCAGGTACCAGGCATA
CACAATGAACCTGCACACATACAAAAGTCCATAGAGCCATAGTTACCATTGTGAGCTCTGAGAACC
AAATCCGTGTTCTCTGCAAGAGCGACATGCACGCTGAGAACCAGGCACCTTTCCCACTGCCTCTTG
AGACAAGATCTCACTATGTAGTTCACACTGGCTTCCGACTTGCCACCATCCTCCTGCCTCTGCCTA
TAAAGAATGCTAGGATTATATAGGTACAAAATCACACCTGGCTGTTAAGGTTTTTCTGGCTGTTTT
TTTTTTCACCCCCATGAATGATTTTGAAAATAGTTGAGCTGTTTACATTAATAAAACAAAATCAGA
TGGAGACTATATGTCATTATTCATGAATCAAATGACTAGTAACAATACTGAGTTATTTTTATAGCT
TTTCTATTTTTGTTTTAAATTTTATTTTTTCCTTTTTTTTTTTTTTCTTTTTAGTTTTGCTTTGTT
TTGTTTTGAGCAGGCTCTCACTGTGTAGTCCTGGGTGATCTGGAACTTACTAGGTAAACAAGGATA
GCCTTAAACTCAAGAAATTTGCTTGCCTCTGTCTCCAGAGTGCTGCAGTTAAAGTTGTACACCGCC
ATGTTTAGGTGTTTTTATTAGTGTGTGTGTATGTCTGTGTGTCTGTGTGTGTGTGTGTTCCCCG
GAGGCCATGTAGGCGCATGCTTGAACCAGAACCAGAGGAAGTGTGTTTACAGTTACCCTGGGAGGC
CAGAAGAGGGCAGGAGATGCCCTGGAACTGGAATTTCTGGTAGTGGTTAACTGCCTAAAGTGCTGG
GACCTAACACTCTTAACTTCTGAGCCATGGCTCTAGTCCTGGGGTCCCCCCTCCTTCTTTTTATGA
CTATGCAGACTATACAAATTTATTTTATATATTAAGGTCTACGGGAGCAGTTTGCCCTGGCAGAGA

GTATATATATCTCATGGTGACATACATATCTCATGGTGACACACATATCTCATGGTGACACACATA
TCTCATGGTGACATACATATCTCATGGTGACATACATATCATCTCATGGTGACACAATTGAGCATT
GAGAGCAGCTACAGACCGATTAGATCAGACTTATTAAATTCTTGCCAAGTATGTGGTGACGCAGGC
CTGCAATGCCAGTAACTTTGGAGACTGAGCCAAGCAGATCACCTGAGCCTAGAGACTCAAGGCCAC
CCTGGACAACATAGAGATATCCTGTTTCAAAATGAAACAAGCTAAGTTCTTTGTACATAGCAGCCT
CTCTATTGACTGTGGCAGGGCAGCTGACAGTGTTCTCACCTAGTCACAGATGTTCTTTCTAGAGGG
AACAGACCCGATGAATACAAACATTTTTAGCTCAAGTAAAAGTCTATACTATGAAGGAACTACTTC
TTCAAACATCATAACATTTAAAATGAGAGATTTTACAAACCTTTTTTTAAAGATTTATTTGTTTAT
GATAAGTACACTGTCACTGTCTTCAGACACACCAGAATTGGGCATCAGATCTCATTACAGATGGTT
GTGAGCCACCATGTGGTTGTTGGGAATTGAACTCAGGACCTCTGGAAGGACAGTCAGCACTCTTTT
TTTTTTTTTTTTTTTCTTTCATTTTTTCGGAGCTGGGGACCGAACCCAGGGCCTTGTGCTTGCTA
GGCAAGCGCTCTACCACTGAGCTAAATCCCCAACCCCCAGCCAGTGCTCTTAACTGCTGAGCCATC
TTCCCAGCCCCAACATCAATTTTTGGTCTAGATGTTTTACCCTGGTGCTGCCATGCCATCTCGATG
GCCCTTGTGGCAGGGGTGCCGGTAAGGCAGCCCCTAGGGCATGAGTTAGGGAGAGCAAAACCTGAC
CCAGAACCTGACTGCCATGAAGTGATGGAGATGCCGTTTGAGTACATGGGGTTTTTTGGTGGTTGT
TGTTTTGTTTTGTTTTTTGTTTTTGTTGACTTGACACATGCTACAGTCATCTGAGAGTGAAACTTA
ATTGAGAAAATGCCTCTGTATTTTCTCCGGCCCCCTAAGTTGCTTTTGATGAGTGTATTTTTATCA
CAGCAATAGAAACTCTAACTAAGATAGATTGGTATTAGAAGTAGAATATTGCTGTAACAGACCCTA
ACCATGTTCTCTTGGGGAGGATTGTGGGAAGACTTTGGAACTTGGAACTTGGAACAGGAGAAGCCA
TTGGGTACTTAGAGCTTAATGGGCTGTTCTGTGGAGCTTGGAAAGGTGCTGGAGAAATGCGGATGA
TACTTGTAAAGTTTGAGAGCACCTCAAAGATGTTCAGGACAGTGTGTGCAATACATTTGAGTTAAG
AATCTATGGTGTCTGGTCAGCTGGAGCTGAAGATTCAGCTGTGATTAATAAGACCACTAAAGTAAA
ACTTTTGCTTTACTGGTACAATCAGTGCTGGTTAGCTAAGGGTTGACAGATGAGCAGTGACTAATA
AGAGACTGGCATCAGAAACTGATCCAGAGAGAGCCAAGGCTGCATCTCAAACTGGCAGCCAAATTT
GATCACATGTAAGAATCTCCCTCATGGGGGTTGGGGATTTAGCTCAGTGGTAGAGCGCTTGCCTAG
GAAGCACAAGGTCCTGGGTTCGGTCCCCAGCTCCGAAAAAAAAAAGAACAAAAAAAAAAAAAAAAA
GAATCTCCCTCATGTTACAGGCTTTGGTGGCATGAGAGCTTTAGGGTTGAAGGATCATGGAGAGCA
GCCGAGGCTCCGCACCATGTGGCGGGGCAGAGGTACAGCCCAGTTACCACAGAGACACCAGCATAT
TTGGAGGTGCCAGGATCATGGATAATTGCCTAAGACAGGAGGCTGGCCTGACTTTGTAGGACAAGC
TCCATGATCTGTTTGGCAGGACTGGAGAAACAGAGCTGTAAGGGAAAATGAGGACACAGCTGTTCC
AAGATATGATTGGAGAGAAGGGTTTCATTGCAGATCTGAGGAAGAGGACAGCCAGAGAGGCATCTG
GAAGGGTCCAGATTGAACTGGGTCATGAGAGGAGAGAGGGCTAAGAGGACCAAAAGAGCCTGTGAC
CAAATTATCAGGGTTATAGAGAAAACAGATGCTTGGGAAAGAGAAGGGGGAGCCCCTGAGCTGGAG
AGATTTAAAGTAGGGGGCAGGATGAGAAGTGGCTGGGGCAGGATGAGAAGTGCTGAGGAGCCAAAG
GCACTCAGTGAACCTAGAGGCCAAGGATACATTTTGACATGCTAATAGGCATTTTAGTCATTTGTC
CTGCATTTCTTTAGGACAGGCCAAGCTGCCTGGGTCATTGTGAGTCCCAGATAATTCTCTTGAAAT
AAAATGTTTTTTAAAGAGAGGAGGGGAAGGTTGGGGAGGGTGGTCTGAAGTTAAGAGACTTTGGAG
TATTAAGACATTGGATATTTTAGAGAAAATTTTGAACTTTTAAGAAGACTGACCTTTTAAAGTGTT
TGAATTTTTAAAGACCAGGATACATCAGGGTGTAGGGACACATGACCCTGTCTCGCCCCCCCCCCC
CAAAATTATAATTTTTTTAAAAAGACTGTGGGAGCTGGGTGGTGGTATAGGCCTTTAATCCTAGCA
CCCAGGAGGCAGAAGCAGGCAGATCTCTGAGTTTGAGACCAGCCTGATCTATAGCATGATTTCCAG
GACAATCAAGGCTACACAGTGAAGCCTATCTTAGAAAAAAAAAAGATTGTAGTTTTAGTTTGCGATG
TATTTTATATTGAGGTGCTGACATTAATATGAAATCTTTGTGAGTGGGCAAGAAAATAAAGACTAA
AGCTGAATACTGATGCCACTTGTGTGTCAGATTGACAAGGGGTTTTGGAATTTTTTTATTTTTTTA
TTTTTTTTTAGGAATATATCAACCAATTGTTTATTACACAGCATGAACAAACACAAAAATCAAGCC
TTTTCCAGATCTTGCTGACAAGCCTATGGTGTCAAAACTCGGAAACGAGAGGCAGGACCAGGAGTT
AAAAGACCAGCGAGGCCTCATGGAGACCTTGTCTCAAGCAGAAATAAACAGGGTTGGTAGCACACA
CGAACTCTGAACATCACGAGTGTGCACATACCCACACATGCACCTGTAAAAACAAATCCCCCATCT
CCAATGTCTCGTTCTAATCTGTTCTTGTATTTATTAAAGATAACAAATTTGCCTTTATTACAAATT
TCTCTGCAAACTAGAAAATCTGAAAGATCTATTCCAATTACCTTCTAAATCAAACTACCAGGCTTT
GACTCATGCTCAATTCTTGGGTAAATTTGTCATTCGCATGAATCCAAATGTCACACATCCTATATA
ATTTAAAGGTTAACAAGTAGAAGAGATGTCCCTAGCACCAAGAAAAGTTTAATCTTAACAGAAAAC

AGCTTTCACATCTGCTGTGTGGCACCTTTAACGGCAAGGACGGCGTACAATTCGAACTGCCCTAAT
TCTTCTGGTTCTGCCCGATTTTAGCATTCTCAGACGGATCCCATCTCTGATAATGGCAGAAAGTGC
AGAGACATCTAAATGGCTCATCTCTGTTCTCATTTCCTTCAAGCTGTCTTTGTCTCTGCTCAATCC
GAACAAATCTTCTCATCCTTGCTACAGGTTCTTTCAGCACCGACGACAACAATGTGTGGACCCTTC
TCTTGGGAAAGGCGCTTTGAACTTCCCTCATGATTCTTTCACTTCTGTTCTCCACAGGCTGGTTCT
GAACCCGGTGACGAAGGCTGTGATGACGATGATATTTTGGCCACTTGGCACTGGGGTTCAGGGTTA
GCTTTTTCATGACCTTTACTAGTGTTTCTGGTTGTAGGGTTTCTGAATCATTGGGGTGAGTCCTCT
CCACCTTTCCTCTGAGATCTATCATCTGAGTTTCTGGATACACAACTGGGTCAACTTTCTGTGATG
GCTCGTCCATGGCGGTGGGCAGAAGCCTCAAAAGCCAGCTCCGAACAAAATTGCTAGCTAATCTTT
GGAAAGACCTAGACTTTGGCCCCAACTAGCAGACTGAAGTGCTGGAATTTTTTTTTTTTTTTTTT
TTTTTTTTGTAATCAACTTGAAAACACAATTGAGAAAATGCTTCCATAAGGTTAAATCCTTGTGCC
ACCATGCCTGGACCTAAGCTTTTCATGGCCACTATTCCTCGAGGTCTGGATCAGAAGCTTGTGTAT
TTCATTTCCGGATTGTCGTTCACTCCAGATTAAAAGTCCAAATGAAAGCAATAGCCATGTAATAAT
GCCTAGATATAACTCTTCCTTGTTCAGCAGCAAATGCATAAGCAATAAGCTTAGCTGGGTGGGATC
TTCCAAAGCTACTCTGCTCTTTTTCTTCTTGGACATAGGATTCAGCAACATTCTACTTCTTGATGC
CCCTTTATTCTTTGAACCATACATTTTTACTTTTCCTTTCGTAGCTTCTTCCTTTTCATCAAAAGA
TTCTTCATAAGAGTGAAATTTGGGGTTAGAGAGATGGTTCAGTGGTTAATAGCACTGACTGCTCTT
CCAGAGGTCCTGAATTCAATTCCTAGCAACCACATGGTAGCTCATAACCATCTGTAATAGGATCTG
ATGCCCTCTTTTGGTGTGTCTGAAGAAGACAGCAACAGTACTCAACATACATAAAATAAAAATAAA
TCAACATACATAAAATAAAAATAATTTTTAAAAAAAAAAGGTGAAATTTAACCACACAACAGAATT
TATGCCAGGCTTGTTTGAGACTTTTGTCAAAGCAATTAATCTAAATCTCTTCACCTTAGCCTCAGG
TAGACTCTCTGGACAATGGCAAAAAGCAGCCACATTCTTCATCAAAATATTACAAGAACGGTCTCT
CAGCCACATACTAAAATTCTTCTCTGAAACTTCTAGAGCCAGGCTTCCACAGTTCAAACCACCTTC
AGCAACAAAGTCTTCTATATTCCTACGATGATAGCCCTTTAAGCCCCACTTAAAGCATTTCACTGA
ATTCCAAATCTAAAGTCTCCAAATCTATATTCTTCCAAATAAAAGCATGGTCAGACCTACCTATCA
CAGCAATATCCCAGTCCCTGGTACCAACCTCTGTCTTAGTTAGGGTTTCCATTGTTGTGAAGAGAC
ACCATGACCAAAGAAACACTTTTTTTTTTTTTAATATTTATTTTATGTCTATGAGTACACTGTTGC
TGTCTTCAGACACACCAGAAGAGGGCATCAGATCTCATTACAAATGGCTGTGAGCCACTACGTAGT
TGCTGGGAATTGAACTCAGGACCTCTGGAAGAGCAGCCAGTGCTCTTAACCGCCGAGCCATTTTCT
CCAGTCCCAAAGAAACACTTATAAAGGACAATGTTTTTTTTGGTTTTTTTTAAAGGTTTATTTATT
TTATGTATATGAGTACACTGTAGCTGTCTTCAGATACACCAGAAGAGGGCATCAGATCTTACTATA
GATGGTTGTGAACCACCATGTGGTTGCTGGGGATTGAACTCAGGACCTCTGGAAGAGCAGTCAGTG
CTCTTAACCCCTTAGCCATCTCTCCAGTTCTAAAGGACAATGTTTAATCGGGGCTGGCTCACAGGT
TCAGAGGTTCAGTCCATTATCATTGAGACAGGAGCGTGGCAGCATCCAGGCAGGTGTGGGGCTGAA
GGAGCTGAAAGTTCTACCTCTTGATCCAAAGGCAGACCAAAAAAAAGACTGGCTTACGGGCTTACC
ATAAGCAGCTAAGAGGAAGGTCTCAAAGCCCACCCTACAGTGGCATGTTCTCCAACAAGGCCACAT
CTCCTAATAGTGCCACTCCCCGGGCCATGCATATTCAAGTCGCCACACCCACTGAGCCATCTCTCC
AACCTGCTCCAGACCATCTCCCCTGCTTTTACCTAAGCTCATTAGGCAGCAATATGCCTCTTATTG
TTTGAGCTCAGCATCCTGTTTTTCAAAAGGCTGCTTGTCATCACAGTGGTTTGTTCCACAACTCTC
CCAGTTTCTTTGTNAAAACACCAATGCCTAGAGAGATGCTCTTCTGTACATATCGCATGTGCAGAA
GAAAGGGTGCCAGATCCTTTCATGTGGACCNTGTCATGTCTTTACCCACGTAGTCGTCTGCTCTGA
CTCTTCTCGAGATGCTGANAACTGATTGAGCGTAGGATGCTCTGGGTATGTGCATGGGACAATTTT
G

SEQ ID NO: 8 (RAT GCR2 HOMOLOGUE NUCLEIC ACID)

Rat GCR2 (Stella) homologue genomic sequence; different intron-exon structure from mouse-Stella (fused exons). AC103122 (11084 - 13244: contig of 2161 bp in length)

CGAAGGACGGTAAGGAGAGAAGAGGGGAGAGGATCAGGACTGAGGGGAGATATGCACTGAACGGGG
GAGTTAGTAACGAGGAAAAGATAGGGAGAAAAGTGGGAGAAAAAAGGCCGGGGAGGGGGAGGGCAT
GGAAAGAAAGGCGGGGGGGGGAGATAACATGCGGGGGAAGTAAGAGGGGGGGGGTAAGGAGGGTAC
AGGTAGCACAGGTGGGGGGAAGAGAGGGGAGGGGGGGAATGGGAAAGGTGAGGGTGGGTGGGGGAG
TTTTCGGCGAAAGGGGCCGGAGTGTGGATTATCGCGTGGACCAGAACGGGGGAAGGGCCACATTTG
GGTGGGCGGGAACAGAAAGGAAATCTTTTTAAATCGGTTGGGTCGCAGGGTGGGTGGACATTGAGA
AAAAAATCATCAAAGCCCCTAAGGAGCATTTGTTTCGGAGTTATACGTATGGATATTTTATTATAT
GGGACGAGAGATAAAGAATACTTCTTAAGTAATCCCTTTAAAAATAATGTCAGGCTGGAGAAATGG
TTTCATGGGTAAGCAAGTGTGAGAGATGAGCGCAGACCCCCAGGACCTGTGTAGACTTAATGCAGA
GGTGGATGCACGCCTGTAATCTCAGCATGCCTACAGCCAGATAGGAGATGGGGACAGAGAAGTGTG
GGGGCCAACTAGCCTGGTGTCTACAGCCTGGTGTCAACAGCAGCCTCCTACCTCAAACAAGGTGGA
AGGTAAGGGCTGATACCTGAGATCGTTGTCTGACCTCCACACACATTGTGCTTATACTTTACACAC
ATACTCACACTCACACATACATACACATATATACCTGGTCTCCATTAGGCTTCTATTGCTGTGATA
AAGATTACGACCGAGGTCTTTCCAAAGACTAAGCAGTTTTGTTTGCAGCTAGTTTTTGAGGCTTCT
GCCCACCACCATGGAGGAGCCATTAGAGAAATCGACCCAGTTGTGGACCCAGAAACTCCTCAGACG
AAAGATGAAAAGGACGCATCCGCTGATTCAGAAGTCGTAAGCCAGAAACACTAGTAAAGGTCATGA
AAACGCTAGCCCTGAACCCCAGTGCCAAGCGGTCAGCACATCGTCGCAGCCTCCGTCTCCGGATTC
AGAGAAGACCTGTGGAGAACAGAAGTGAAAGAATTTCGAGGGAAGTTCAAAGCGCTTTACCCAAGA
GAAGGGTCCGCACGTTGTTGTCGGTGCTGAGAGATCCTATAGCAAGGATGAGAAGACTTGTTGGGA
TTGAGCAGAGACAACACAGGCTGGAAGGAAATGAGTAGAAACGGAAGAGTGTGCCATTCAGACTCA
CTGTGCTTTCTGCCATTATCAGAGACGGGATCCGTCTGAGAACGCTAAAATCGGGAAGCATTAGGA
CAGCTTAGATTGTACACTGTCCTTGTGTTAATGATGCCATGCAGCAGACCTGAAAGCTGGCTTTTG
CTTTTTAAGATTAACCTTTTCCTGGTGCTGGGGACTCTTCTAACTTGTTAACCTTTAAATTATATA
GGGTGCGTGATGTTTGGATTCATGTGAATGACTTAAATTTACCCAAAGAATTGAGAAGGAGTCAAA
GCATTCTGTGAATTTTTGAAGCCTCAAGCCCGGGGCCGAGAAACAATGTTAATAGAATTTGGAATA
GTTTGGTTTAGAAGGTAATTGGGATAGATCTCTGAATTTTCTAGTTTGCAAAAACAAAAACAAAAA
AAAAGACTAAAAAAACAACTGGGGAGGAGTAAGGTTATTTCAGCCTCCATGTCTTGATCCCAGTCC
ATCATGAAAGGAAGTCAGGACAGGAACTCAAGTCAGGACCGTGGAAGTAGGTAGCATCTGAAGCAG
AGACTTCTGGGATGAAAGCGCTGCTTCCTGACTCGCTCCCCACAAATTGGTCCCTGAGCCTTCTTG
TCCACCCTCGGACCCCTTGCCTAGGGTTGGCACCACCCACAATGGGCTGAGCCTTCCCATGTCAAT
CACTAATTAAGAAAATGCTGTACAGCGTTGCCTACAAACCAGTCTTAAGGAGGCGTTTTCTCCATT
GTGGCTCTCTCTTCTCTGATAACTCTAGCTTGTGTCAAATTGACAACCAACCAGCCAGCACACAAA
CANTTAAAAAGATAGAAATAATGTTAGTGNNTCNCATCGAGCAAGAGTC

SEQ ID NO: 9 (RAT GCR2 HOMOLOGUE NUCLEIC ACID)

Rat GCR2 (Stella) homologue genomic sequence; different intron-exon structure from mouse-Stella (fused exons). AC099436 (1 - 21688: contig of 21688 bp in length)

TTTATGATTTTAAAAGTTTAATTCTGGACTGGAGAAATGGCTCAGTGGTTAAGAGTAGTAACTGCT
CTTCCAGAGGTCCTGAGTTCAAGTCCCAGCAACCACATGGTGGCTCACAACCATCTGTAATGAGAT
CTGATGCCCTCTTCTGGTGTGTGAAGACAGCTACAGTGTATTCACATACATAAAATAAATAAGTAA
GTCTTTAAAAAAAAAGTTTAATTGTGTGTGTGTGTGTGTGTGTGTGTGTGTAAGCTTGCAAATA
AGAGGACAACTTTGAGGAGCTGATACTCTTGTTCTACTGTGTAGGGACCAACAGTTGAACTCAGGT
TGTCCGGCTTATGCAACAAGCTTTTTTACTTGTCTTCGCCAGCCCACCAGTCCTGTGTAAAGCTGC
ATACAGCTCACGTTGTAACATGCTTGTCTAGTACTTGCAGGACATAAACTAGCAAGCACTTGGGTG
AAAACGGGAGGATCAGAAGTTCAATACTATCCTTGGCTACTTAACAAGTTTAAGGCTATAGGAATA
GGGATATAGGAAACCCTAAGAAAGTAAAATTTATTTACTGTGCTTTAGGTGATCAAACCTACAGCT
TTGCATGTGATAGACAAATGTTCTACCACTAAGCTACATCCTCAGTGTTCTTTATTATCTATTTTT
TTAATAAATCTTTTTTTTTAAACATTGTTGTGAGCCACCGTGTGGTTGCTGAGAATTGAACTCGGG

ACCTCTGGAAAAGCAGTCAAGGAAGCCAGAGTGGCCGGAACTCCTGAAAATGGAGTAACAACAGGT
TGTTGTGAGGGTAATTGAACTCAGGTCCTATGCAAGAGCAACAAGAGGTCTTAGCCCTTTATTATT
TTTTAATATCTAATTATTTTTTTATTTTTTTATTTTTATTTATTTATTATATATAAGTACACTGTA
GCTGTCTTCAGATACACCAGAAGAGGGCATCAGATCTCTTTACAGATGGTTGTGAGCCACCATGTG
GTTGCTGGGAATTGAACTCATGACCTCTGGAAGAGCAGTCGGGTGCTCTTAACCACTGAGCCATCT
CTCCAGCCCTAATTATTTATTTTATGTATGTGAGTACACTGTAGTTGTCTTAAGACACACCAGAAG
AGGGCATCGGGTATCAGATCACCATTACAGATGGTTGTGAGCCACCATGTGGTTGCTGGGAATTGA
ACTCAGGACCTCTGAAGAGCAGTCAGCATTCTTAACGACTGAGCCATCTCTCCAGCCCAACCCCCC
CCTCCATTTTTTTTAATACCAAAAAGGAGCTTCCTGCAAGAGAACATGGCCATATACATCCACCCC
TCTTTCTTTGAGGTTTTGATAGTGCTGCTGCTCCTGCTGCTTGGAAAAGAAAATCCTCTAGGACTA
AGCTAAAAGAGCCAGATGGATGGAATTGCGGTTGCCATGGCAACACCATCTGAGGATACTGAGCCT
GCTGTCTCTCCCAGTTATGTTGACATTTGGTGTGGTTTCCATGCTTGAACACTGAAGTGTCTGTCC
ACCTATGAAAGAGAGGCCGTTCCCAGAGGTCTTAATTTATCTGCTCCATCAGTAGCATTTGGACTG
CTTACATTTATGTCTGGACAACCATTGGCCAGGAGGTAGAAGAGGATGGAGGAAGGCCCAGACCTG
GCTGGGTACTATCGGATCTAGTGAAGCTGTATAGAATCTGTCTGGGGTTTATTTACTCCCAACTGG
AGCAGAGGCAGGTGCTCAGGAAGGCAGTAATGAGATCGACCTTACCACAGGAAATAAAGTGACTAC
TGTGGATACCATCTGGGATGGATCACCGCTGAGCCACTCCACCCTCAGAACAAAGCTACCATATCG
TTAAAGTGTCCTGAGCTCAGGGGAAGGCCCCTGCTGCCTGTGAGTAGAGCCAGGTAACCTTAACAA
GCCCTATCTACACTTCATCTTAAGGCATTCTGTTACATACAAAGAATTCTACTCTTTAATGAGCAG
ACTTTAAAAAAAATGAGCCAACTTACACTTTCAGAAGTTTGATCCTTGATTGCACATGCCTGAGAC
AGATGGCCAGTCTCAAGGACAGGCCTCCCACACTGAAGTTAGTCTTCAGCAGTATGTCATGTCACC
TAGGCAACCAATAAGAGCTCACCTAAGAAATTTCCACTTTACCTGGTAAAGAGCGTATCTTCCCTC
CCTTTCTCTCCAATTAGCATCCTCACTTCCAGACTTCCCTACTACCGACTTTAAAAGATCAAAGCC
AGGCACGATAGCACAGGCTGAGGTCGGAAGGCAGAAGCCAGAAAGATCTATGTGATTCCCAGGCTA
CTTAGCACCACACAGTTGAGACCCTGTCTAACAAATGGAGGTGGGAGGCATGGCAGTAACCTGAAC
CTACAAATTTATCAAAATTTCAATTAAGAACATTTTGTTTTGTTTTTGAGGCAGAATCTCACTACG
TAGAGTGGGCTTACACCCAGTTCCAATTAAGAACATTTTAAGGGCTGGAGAGATGGCTCAGCTGTT
AAGAGCACTGGCCACTCTTCCCAAGGTCCTGAGTACAATTCCCAGCAACCACATGATGGCTCACAA
CCATCTGTAATGAGGCCTGATGCCCTCTTCTCTTGTGTCTGAAGACAGCTACAGTGTCCTCATTTA
AATAAAAAAACATTTTAAATAGAAAATCCAACAGGGAGGCTGATGAGAAACGACATAACCTTTGTC
CAGGAGTGTGGTTAAGGGGAATGGAACCATAGTAGAGTCCATTTCTTTTTCTCTTTTGAGCCAAAA
AAGTTTTATTTATTCATGTCTTCCATTTGAAGTACTCCTTGGTGGCATCCTAAGCCTGAGATTCTT
TGCCATACGTAGTTCTTAACCACTACCCAACTGCAACCAACTGTTTTCTGTGGCATCCCTCTTGAT
GACTTTTACACAGGGGTTGGGGATTTAGCTCAGTGGTAGAGCGCTTGCCTAGGAAGCACAAGGCCC
TGGGTTCGGTCCCCAGCTCCGGAAAAAAAAAAGATTTTTACACGGGCACACCCACTCCACTAGTTT
CTCATGATCAAGTATAATCAGATTGATCTGGTGCTCGGCACAAAGTGCCTCCTCCAGCTCGACACA
CACGAGCTCATCACAGTCGGATTCGAGCACACAGATGGGTTTGGCACTTGTCTAAGGCTTCAGGAG
CTTTGTGTTTGCCAACGTGCTGGGCTATCGTGGATGAGGGCGGTCTTCAGCACCTCTTGTAGAGCA
GTGTTGACATCCACACCTCCAGTGGCAGTGCCCTGCTCCGCTCTCGGAAGCTGAGGTGGAATAGCA
AGTCAGTTTCTTCTCTCATTTCCCAGACACCATTATGGATGCCTCAGTGTCAGCTGTTCATTTGTC
ACTTACTTTTCACAATTGTGTTATTATTATTGATAGATTATTGTCTCTGTCACTAGCTACCGAGGC
AGGGTCTCACAGGACTTATCCAATTGTTTCTGCCTCCCTCGAGCTAAGCCTGAAGGCATATATGAA
TCATCTCACCAAGCAGCATCAGCTTTTAAGAGTTTCTGAACGTCAACACGTTAACACTGGGGCCAT
ATTATGTACGATGTAATTAATCCTCGAGCAACTGGCCACACAGCCCTAAAAGAAAAAAAAATCCAG
AACCAAACAAACCAAAAACAGGCACGAATGGTGGCACACACCTTCAATCTTTACACTTGGAAGGTG
GATCCAGGAGGAGTAGGAATTCGAAGCCGGCCTAGAGTACCAGTAGTTGAAGGCCAGCATCTGTCT
CAAAGCAAACAACGATAATAAAGTACTTGTTTCAGCTGGGAGGTGGTGGTACATTGTGGAGGGAGA
GGCAGACCTTGAACACTGGGTTCAAGGCCAGCCTGGTCTAGAGATCAGATCCCCAAAACAGCCAGG
GATAGACAGAGAAGCCCTGTCTCAAAACGTGAGGCTGGAGAGATGGCTTAGTGGTTAAGAGCACTG
ACTGCTCTTCTAGAGATCCTGAGTTCAATTCCCAGCAGCTATATGGTGGCTCACAACCATCTGTAA
TGGGATCTGATGCCCTCTTCTGTGTGTCTGAAGACAGCTACAGTGTACTTATATACATGAAATAAA
TCTAAAAATAATAATAACGTGCACAATGTTCTGCCTGCCTATATGCCTGCAAGCCATCCCTCCAAC

CCAATAAATAAATATTAAAAAAAAAAAAAAGCACAAAACCAAACCAAAAGTAAAATAAATAAACAA
CTTTTATTCCTACCAAGAGAAGACACATTTCCTTGAGAACTAAGGACAACATGTTTATGGTTAGAA
CACAGAAGAGAATAAGAGCACAGCTCAGCTGGAAGAAACAAAGTGTTCTGGGGACAAGGAGCCTTC
TTCCCTGCCCCCATAACAGTGGCCAGATTGAACCTCTGGTACGACAGTCAAGTTGGTGCTGAGTTC
AAGTTGGAAAGTCACACTTTCTAAATCAGGATCAAAGCAAGCTGGAGGCTCCCTCACTCAGCTCAC
AAGTCCTGTGAAATCAGGAAAAAAATATCAGTTAGACACTGAGTTCCCAGGCAGCCAAAAACCAAA
GATTTCCCACCACCAAAGACAAGGTATCTTGGATTTCCAAGGGAACAGAATGAGAACTTATATCTC
TGACTGGCATTTAAATCCTACAGCCATCCCCTCTCCAGCACATCCTTTCTCCAGGGAATGGTCCCA
GCACCCATGTCAGGCACTCACCCAAGTAGTCATCCATCAGAGAGCCAATAGCAAACTGCGAGAGGA
AAGGGAGAAAGGATGGTGAGGTGGGGCCCCACCCCATTCCGAGCCTTCTGTCATCTATTCCCTGCT
CATGGACACAGAGCACAGAGCCCCCAACAACTGTGGATGGCAAGAGGTCAACAGCGCAGATGGGGA
AAGAGCTTGCTCCAACCCTGATGACCTGACCTCCACCCCCAAAATCCACAGCAGCATGCGATGACC
TGAAGGCGGTCTAAATGTCACACTGTGGCGAGTGTGTATGCCCACACATCCACATAAATATGTTCT
ACAAAAGAAACGAGAAACCCACAGCTGTCAGCTGTGAATGATGACTTTGGATTATTTATAATCCTA
CTACCCAGGAGGCTAAGGCAGGCCAGTCAAGCAAGAGACTCACAATGTCATTCTTGTCTACACGTG
TCCCTACAATCTTCAAGCGTATCTCATCGTCCTGCTGAATTACAATGTCCTGTGGAAAGGAGAGAG
CAGGGTCATCAAGCAGACTCAGGCCTGGTCCTCATCCCTCTCACCAACTCCTCCTCATTCGCTCAC
CTCATCCATGGTCTTGTAACAAGGGGGGTTCGAATTTGGATCAAACTCCATCTCTGAAGGGATGGA
CTAGAAGGAAATTGACACAAAGGTTAGCATTTCAAATAGCTGCATCAAAGGATGAGAGTCAGGGGC
TGGTTTCTCCTCCTCGGCCTCACCCCACACGCCCAGACTCACGTGTCGAGAGATGAAGCAGGACAT
GGGCCCAATTTCTGTGAAAAGTCCAACCTAGAAGGAAAATGACCGTGCTTCAAACGCTCTGAAGCA
TCTTTACCTGATTTCTAGGCACATTATTCATGTTTCTTAACAGTTTAAATTGTAGCATTTGTTTTA
ATTTCTCTCTGTGTAATCTTTCATTTCTTTACATTTTTGTTCTTCATTATTTTTATGTGTAAGAAT
ATTCTGACCTCACATGTGCCTGTGCACCATGTACCTGCAGTGCCCATGGAAGCCAGGAGAGGGTAT
TGGGACCCTGCAGAATTAGGAGTTACAGATTATTGTGAGCCATTGGCTGGGTGCTGGGAGTCAAAC
CCAGGTCTTATAGAACCAGTAGGTGCTCTAAACCACTGAGCTATAGACCCCTTAGCCTTTAAGAAA
CTTAATTTCTGAGGCTAGAGAGATAGCTCAGTGGTTAAGAGCACTGACTGCTCTTCCATGGGTCCT
GAGTTCAATTCCCAGCAACCACATGGTGGCTCACAACCATCTGTAATGAGATCTGATGCCCTCTTC
TGGTGTGTCTGAAGAGAGCTACAGAGGAGTGTGTATAATAAATAAATCAGGGGCTAGAGAGATGGC
TCAGCGGTTAAGAGCACTGATTGCTCTTCCAATGATCATGAGTTCAATTCTCAGCAATCACATAGT
GGCTCATAATCATCTGTAATGGGATCTGATGCCCTCTTCTGATGTGTCTGAAGACAACAGTGTACT
CATATAAATAAAAATAAACAAACAAACCTTAAAAAAAAAAAAAAAAAAAAGAAAAGAAAACCCAAA
ACTAAGATAAAATAAAATAAATCTTGACAACCACAAAAGGCTTAAGGCAACTAATAAGTGGACTGG
GAATTGAACTCTCACCTTAGGAAATACCCCGTAACCTTTCTTTTTTTTTTTTTTTTTTTCTTCTT
TTTTTTCGGAGCTGAGGACCGAACCCAGGACCTTGCACTTCCTAGGCAAGCGCTCTACCACTGAGC
CAAATCCCCAACCCCATAACCTTTCTATAAATAATACTCTTACCTTGTTGACCTGAGTGACCACAG
CATCCACCACTTCCCCTTTAAAGGGCCGGAAAACAATAGCTTTGTATTTCACTGGATAAAGAACAA
AACCTCGGCCCGGCTGGATCACACCAGCACCAATATTGTCGATGGTAGTGACAGCAATCACAAAGC
CATATCTGCAGGAAAGATGAAAAAAGACAGCTACTGTATGTGAAGAGCCTCTAAAAAGCCACCAGC
AATAGTCTGCGTGTGATGGAACCTCTGCTCGAACAGCTCGATGACCAAGAAGAGACAGAACTCAGA
TTAGCACCTGAAATATTAAATGGTGCTCTCACAATTGTACAGTAAATGCCCAAGAAGGCACAGATA
TGCTGACATACACCTATTCTCTCAGTACCAGGACTTGCCAGGTCAGTGGTGAGACAGGTCTTTCGA
AAACCACAAATCAGACAGAAAATTGTGACGAAAACCTTTAATCCCAGCACTCAGTGGCAGGCAGTT
CTCTGAATTAGAGGCCAGCTTGGTCCACATAGTGAGGCCATCTCGAAACCCAAAACATTTGCATAA
TAACGGTCTGATCTCGCATAAGCGAAGAAAATTTGGTTTAGCAACCTTTTAGAAGGCCCAAAATAG
GCAAAAACTGGCTGCTTCGGATGCCTGGAGTGGTGAAAGAGTTCCTCAGAGTAAGTAACAAGCCCT
GACTGAAGGAGTGAAGTAGAGGTTACAGAGTAGCGTTATTGTGCCTGCATTCAGCAGACGACACTG
TGAATCAGACACTTACTTCCCAGTGCAGGTCCCCTCCACCTCGGTGAACAGCTTCTGCTTCACCGT
GTTGAGCAAGTTGGGACCAAAGTAGCGTGGGTGCAGTAGGATCTCGTGCTCCAGGGAAATCTGCAG
AGAAAGGAAGATGAAGACTCCGCCAGCCACACTGAGAACAGGAGGCGACCCGTCGGCCCTCCAGGC
TCCTCCTGTCCCTGCCCTCACCGCTACCCCGCGTCCAGCTCACATGATAAAACATCTTCTGCAGAA
GCTTGGACCGCAGAGGCCAGAACTCCCCAGGAAGGGACCTCGCCGGAAGCACTAGCAGAAGTCCCA

CCAAGTCTCCGCAGTCGCTTCCGCAGATTTGAGTCTTAACGCCATGGGCGGGGAAACGTGAAGCCC
CGCCCCTCAGGCCTTCCCATCAGCGCTCATCAGCACAGCCAGGATTACACAGAAAAACCCGGTCTC
GAAAAACCTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGGTTAAGAGGTCTGGCTTGTCGCCACAT
GCCTTTAAACCCAGCCGTGGCAGACAGATCTCTAAATTCAAGGCTAAGCCACATCTACAAAGTGAG
TTCCAGGATAACCAAGACTGTGTATACAAACCCTATAAAAAAATTTGTTTTTGGGGTTGGGGATTT
GGCTCAGAGGTAGAGCGCTTGCCTAGCAACCGCAAGGCCCTGGGTTCGGTCCCCAGCTCCGAAAAA
GAGAAAAAAAAAATTGTTTTTTAAATTTTATTTTAGGGGCTGAAGAATTAGCTCAGTCCTTAAGAGC
ACTTGCCAGCCCCCACAGGATAGCTCACAATCTTATCTGTAACTACAGTTCAGAGAGAACTGACAC
CCTCTTCTGGCTTCATTCAGCACTGCATGCTAGTGGTACACAGACATAATGCAGGCAGAACACCGA
TGCTTGTAAAATAAAAATAAAGATGAGGTAGTTGGGGAGATTGCTCAACAGTTAAAATCAATGGTT
GCTCCTCCGAAGGATCCAGGTTTGATTCCTAGAACAAACATGGTAACTCAACTAGCTATATTTCAA
TCCTAGGGGATCCAGTGCCATCTGGGGCCTCCATGGACACTTCTCCCTTGTGGTGAACAGGCATAG
ATACAGCCAGAACATTCATACATATAAAATAAAAATAAAGGTTTTTACACATAAAATAAAAATAAA
GCTCTCGAAGAGGACCTGAGTTCAATTACTAACACTGCACCCGAGGTCTCACAACTCCAGCTCGAA
GGGGATCTGAAACTTTCTCATTGCCTCAGGAGGTACCAGCACTTGTGGGCTTGTACTCACATACAG
ATAACAGACATCATTGAGTACACCTAATTAAGAAGAAGTCACTTGGAAGTGTGGCACACGCCTTAA
ATCCCAATATTCAGGAACAAAAGGCAGGTGGGTCTTCAAGTTCAAGGCCAACCTGGTCTACAGCAT
GAGTTCCAGAACAGCCAGGGATACATTAAAAATGAAGGTGTCGGGGTTGGGGATTTAGCTCAGCGG
TAGAGCGCTTGCCTAGCAAGTGCAAGGCCCTGGGTTCGGTCCCCAGCTCCGGAAAAAAAAAATGAA
AGTGTCTTGTTAAACAAAACAAAAAGACAACAAGCAAAAAGATTACTTATGTGGGCACGCACTGGG
CTTACTTTCTTTTCTATTTGAGGGACGGTTTTATTATGTGACCATGGATGACCTGAGATTTGCTTT
GTAGAGTAAGCTTGCCCTGAACTTTTTTTTCCCCTGGAGCTGAGGACCTAACCCAGGGTGGTGGGT
TTATAGGCAAGCGCTCTACCACTGAGCTAAATCCCCAACCCCCCACCCTTCACTTTTAGGATACCA
AGCAGACTCCTTGGTCTAGGAACAACCTCAGCCTCGGGACTTTTTTTTTTTTTACACTAGGTTCCG
CTCCTGTTAGACTAGACTCTTCCACCCCTCAGTACATTATACTACTAGGACACTAGGACAAACCAT
AGCAAATCTGTCACAGCACCAGTGACAGCCCTAAGCCTGACTCCATCTTTTCTTTTCTTTTTTTAA
ATATTATTTATTTTATGTATATGAGTACACTGTCATTGTTCTCAGACACACCAGAAGAGGGCATCG
GATCCCATTACAGATGGTTGTGAGCCACCATGTGGTTGCTGGGAATTGAACTCAGGACCTCTGGGA
GAGCAGTCAGTGCTCTTAACCGCTGAGCCATCTCTCCAGCCCCCACTGAAGACTTTTGATCTGGTT
ACCATCTGACCCCAATCTCTTGCAAAAGCCTCCCTTCCTCCTTCGAAGAAACTCTTACGTCTTTTA
TGTCCTTGGCCCATGACTTTGTATTAAATCAGCAACAATGACAAGACCTGTATGTCTCTCCCTAGC
TCAGAAGACAGATCCTTGTTCCTTGTTAATGTTTTGATTTTCTGGTCTGTCCGTGGGGACAGTCTG
ATAGTTCTAAGACTGATAGCTTTGAGGGATTCTAAACTCACAACAGGGCTATTGTTACCGATGGGC
ACAATACAAGGCTGCCATTGCTTTGGAGTGGGACCATTATCTTGACAGAAAGAATTACCATAAACC
CTAGCTGTGATTGCTCCGGGAGTCCATGCTAATGAAACACTGCCCACGGCCTTCAGGAAACTTCTC
ACAGAGTGCTGCCTCTTGGAATGACTGTGTGAACTCTCTACTGTCCACCTGCAGCAGCCATACCGA
AATACAGTCTAATAACCTCTCAACTTCTGCATTCTTAGTCTTGGTGAACTCTTTCGCCTCCAATGT
CATGACCTTTCAAAGTCACCTCACATAGCAGTCTGCAGCGAGAACAGGTAATTCAGGGGCTGGGGA
TTTAGCTCAGTGGTAGAGCGCTTACCTAGGAAGCGCAAGGCCCTGGGTTCGGTCCCCAGCTCCGGA
AAAAAAAAAGAACCAAAAAAAAAAAAAAAAAGAGAGAACAGGTAATTCAGCTAAGACTGGTGACACA
AGTGTAATTTTAATACTTAGGAGGTTGAGGCGAGCGCATCTGGAGTTTGGATTAACCTGGACTCCA
TAGTGAATATTGGGCTAGCTTAGGCTACATAAGCAAGCCTCTCTCTCTCTCTGTCTGTGTCTCTGT
CTCTATCTCTGTCTCTGTCTCTCAACCACAAAAGAGAGAACGGAAAAAAGGAAGAAATTAAGAGAA
AGAAAAACAAAAGAAATTTCTCTAAGCAAAGCATATTTATTTATTTATTTATTGTTTTTCAAGACA
GTGTTTGTCTATGTAGCATTGGCTGTCCTAGAACAATCGTTGTAGGCCAAGCTGGCCTTGAACTCA
TAGGCCTGCCTTTGCCTTCCAAATACTGGAATTGAAGCCTTGTGGCAGCACTGCCCAGCGACACCT
GGAATTTTTTAAAATTTATTTATTTATTTATTTATTTATTTATTTATTTATTTATTTATACACTCC
AGATATTATTCCCCTCTTGGTCCATCCCCCAACTGTTCCACATGTCATACCTTCCCCCACCCCCCA
GTCTCCACAAGGATGTCTCCAACCCACCCACCCTCTCTAATTTTTATTGTACATTCCTCTTTCTTT
CTTTTTTTTTTTTTTTTTTTTTTGGGTCTTTTTTTCCGGAGCTGGGGACCGAACCCAGGGCCTTGCG
CTTCCTAGGTAAGCGCTCTACCACTGAGCTAAGTCCCCAGCCCCTACATTCCTCTTTCTAACTTCT
TTGGCACAGCATCTTGGAGGGTGCAAATCAAGAGACAGCTTTTCTTTTCTTTTGTGATGCCAACTT

TCAAGCATTTACATTTTGGGTTGGGTTGGGTTGTGATTTTTTTTTTGTCTTCGAAATCTGCATTTT
TTTTCTTTCCTTTTTTTTTTTTTTTCAGAGCTGGGGACCTAACCCAGGGCCTTGCGCTTGCTAGGC
AAGCGCTAAAACACTGAGCTAAATCCCCAACTCCTAAATCTGTATTTTTATTTGTAACAACTGTAT
TTCTTTTTCTATATCCTTTAACTCTGGAGTTTTCATTTCTTCCCTCCTGCCCCCATAACTATAGTC
ACAGTTAAACTGTGTTATCAGGAAATTCAGGAAAGGTGCCTTGATGAACAGATCAGGACAGGAGCT
CTGACCAGTAGTCACTGTCTTCCTCTTCCTTAGAATAAGTAAAAATGAAACCAACCAAACTTTCTT
CTCTTTCTTTCTTTCTTTTTTTTTTTTTTTTTTTTTGACGTGTCTCCTGTGCTTTGTCAGTAGCATG
AATTTCATTTTTTTTTTTTTTTTTTGGTTTAAAAAAGGCAACCTCAAAACCCAAACCTCTTTATTG
TCAGGGAAAAGGGAACTGCAATGACTTGAATTTGAGGATGTGGGTACTGCCTCACTCACACACATT
CTCAGACTGTGTGATGCCCTGCACACCTGTAGAACAGTTACATGTATGTGCACCTGTATTTGTGCC
TATTAGAACAGGACCTGCAGGGAAGTCTACCTAACCCGAAACTCCCCAGTGGAACAGGCAGGGTGG
GTGGAGGGCTGGGACAGACAAGGACTCGGCGCACACATACAGTACCACATAAAACAGTACAGTGAA
GGTGGGCTCAAGACCCAGGCAGCTTCCTTCTTTTCAGTAACAGGGCCCAGGCTGCCTTTCACAGCA
CAACCCCACAGCTGAACCCAGGTCTCTCTTCAAAACCAGCCATCTCACTCAGCAGCGCCAAAGGAA
AAGTAGATGTAGCCTCCCTGCAGAGAAACAGCTTTTCTTGTTGTTTTTAAATAAGTAAGTAAATCC
ACCATCCCTCTGCTCCAAGATGGCTGATGTTACACTTTTCTACCAGATTGGTGCCTGCTTAGCTCA
CTAACAGTGCTGCCTCCGCCGGCTGTGGCAGAGTTTCCAGTGTGGTGTTTTCAAGCCTCACCCACT
CATCCTCTCATTCCCAAACATTCAGTGCCCTCCTCACTTAGGGGTTTTCGAAATGTTTAAATTTTG
TATTACTTTAAATATATATTTGTTTTATTTTCATGCGTCTGTGTGTATGCTTGTGAGTTTCACACA
TGCTGTGTGTGCACAGGAATCTATGAAAGCCAGAACAGGGCATCAGATCTACAGGAAGAAACCAAG
TGTCCAAAAAGGGAAGAAACGAGATCCATCTGCCTCTGTGGTGCTGGAATTGAAGGTGTACATCAC
TACAACCACCGGGGATGGGTATGTATGTATATATATATATATATATATATGTGTGTGTGTGTGTGT
GTGTGTGTGTGTGTGTGTGTAAGGGTGTCAGACCTTCTGGAACTGGAGTTAGACAGTTGTGAGCTG
CCATGTGGGTGCTGGGAATGAACCCTGGCCCTCTAGAAGAACAGCTGATGCTCTTAACTGCTGAGC
CATCTCTCCGGCCCCTTATTTTTTATTTGTGTGAGAGAGTGGAGGTCAGGGGACAAACTGAGAGAC
TTGGTTCTCTCCTTCTGCCATGTGAATGCCAGGGATTGAATGCAGGTTGTTAGCCTTGGCAGTGAG
TGCTTTCCCCGCAGGGCCATCTTGTCAGCTCTTTGATTACATTGTAAACCCTGGCACTGTGTTATT
TGCTGGGAAATGTTTTTAGTTGTGGGATGACTCAGCTTTAGCACATGCCTTTAATCCGAGAGCTTT
CTGCTTGTATATTGTAAGCAGGATTAAATAAAGTCAAATCTTAGGTCAAGAGATGGAGCAAGCAAA
GAGTTGACAGGAAATGAACATAGAATTATTGAGAAAAAACATATAGGGGTTGGGGATTTGGCTCAG
TGGTAGAGCGCTTACCTAGGAAGCGCAAGGTCCTGGGTTCGGTCCCCAGCACCGGAAAAAAAAAAA
AAAAACATATAGAGTAAGGGGGAGTCGGGTTTAAACTGTACAGAAGTCTCCATGTCTTATTTATAA
TGTAAGCAGGTCTGCAAAAGCCTGCCGTTGTGTCCTGTTGCCTTTCTTCTGGCAGTGAAGAGGATC
AGTTTTGAAGGCAGGCAGAATAGGTGCGGAGAGATGGCTTGGCAGTTAAGAGTATATGCTGCTCTT
GCAGAGGACCTGCATGCAACTGCCAGCACCCACACAGTGGTTCGTAGCTACCTGTAACTTCGTTCC
ATGGGATCCGATGCCTTCTTCTGACCTCTGAGAGCACCGACCATGCACATAGTGCATGAACATACA
TGCGGGTGAAAGACTCACATAAAGTAAAGTGAATACATCTAATTAAAATAAAGACCACTTTATGGG
CTGGAGAGATGGCTCAGCGGTTAAGAGCACTGACTGCTCTTCCTGAGGTTCTGAGTTAAATTCCCA
GCAACAGATGGTGGCTCACAACCATCTGTAATGAGATGTGATCCCCTCTTCCTGGTGTGTGTGAAG
ACAGCTCCCAGTGTACTCAATACACCCCTCCCCTCCCTGAATGGGAAAAAAAAAAAAAAAGCCTGG
GGTTGGGGATTTGGCTCAGTGGTAAAAAAAATACCTATGAAGCACAAGGTCCTGGGTTCGGTCCCC
AGCCCCGAAAAAAAAAAAGAAAAAAAAAAAAGACCACTTTACACGTAAAAAATAAAAGATGGGCAG
ATTAGGCCCTGTACTAAACAGGATTCTTTAGAGGAACTGAAATGAGTGTGTGTGTGTGTGTATTCA
TTTTTTTTAAAGATTTATTTATTTTATGTATATGAAGACACTGTTGCTATCTTCAGACACACCAGA
AGAGGGCATCAGATCGCCTTAAAGATGGCTGTGAGCCATCATGTGGGTACTGGGATTTGAACTCAG
GACCTCTGGAAAAGCAGCCCCGTGTGTACTCATTTTATATATGAAATATATACACACATACACACG
TGTGTGTTAGATTGGCTTCCTTGATGGTCCAGGTAATTCATCAATGAGAATCAGTAGTTACTCAGT
CTACAAAGCTGAATGTCGCGACAATTCTGATCTGGCACTTTAGACCTAGAGGACTCCTGGAGAGTC
TACATGGGAATCCTGGACATCTGGAGATCCTACACAAAATCCCTGCCATTCCCACCAAGGGCAGCT
GTGAATGGCTGTGGGGAAACATTCCTTAAGCTAAGCCTGAAGACCTAAATCCAATCCCTGGAACCC
GTGTGGTAGATGGAGAGAACTGACTTCTGTTTCATCTGACCTCCACTGGTGTAGCCGCACATACAT
GCATGCAAAACAGTCGTGATAAATAAATCTAAAAAAAGTTAGAGCACCTGTCAATAGATAAGTATA

ACTTAAAAGTGAAACGAAGCCTATGCTTTTAAATCGTAAGGACTGGGAGGCAGTCAGGCACATATC
CAGGTTCCAGACCAGCCTGATGTATGTAATGAGTTCCAGACCAATTAGGGCTATATCATGAGACCA
TGTCTCAAAACCAAAAAACAAAAGAAAAGAAGAAAAAAGAAGAACATCAAGTCAAGCATGATAAAT
CACATAATCCTATAATCCTAATAATGGGGAGGCTGAAGCAGAATGGCCATGCCTTTGAGCTTAGCC
TGGGCAGGACAACCAACTGGGCTACACAGGAATACATAATACACTGCCATTAGAAAAAAAAGCATG
GCTGACTTCGTCACTGCTAGTTGGGGCTTGGGTTTAGGTCTTTTCAAACACTAAGCAATTTGGTTC
GGAGCTAGTTTTTGAGCCCTCTGCCCACCGCCATGGAGGAGCCACCAGAGAAAGTCGACCCAGTTG
TAGTCCCAGAAGCTCCTCAAATGAAAGATGACGAGGACGCGTCCGCTGATTCAGAAGTCCTACAAC
CAGAAACACTAGTAAAGGTCATGAAAACGCTAACCCTGAACCCCAGTGCCGAACGGTCAGCACGTC
ATCACAGCCTCAGTGTCCGGATTCAGGGCAGGCCTGTGGAGAACAGATGTGAAGGAATCTTGAGGG
AAGTTCAAAGCCTTTCCCAAGAGAAGGGTCCACACATTGTTGGTGGTGCTGAGAGATGCCGGAGCA
AGGATGAGAAGATTTGTTGGGATTGAGCAGAGACAACAAAGGCTTGAAGGAAATGAGTAGGAAGGG
AAGAGTGAGCCACTCAGACGTCTCTGTGCTTCCTGCCATCGTCAGAGATGGAATCCGTCTAAGAAA
GCTAAAATCCGGAAGAATTAGGACAGTCGGTTTATGTACACTATCCTTGCTGCTCATGATGCCATG
CAGCAGACCTGAAAACTGGTTTTTGTTTTTTAAAGATAAAACTTTTCCTGGTGCTGGGGAACACGT
CTTGTTAACCTTTCAACTATGTAGGAAGTGTGACGGTTGAATTCATGTGAAGGACTTAAATTTACC
CAAAGTATGGAGAATGAGTTAAAGCATTCTGTGAACTTTAGAAGCCTCAAGCTGGGGGCTGAGAAA
CACTGTAACTAGAATTTGGGGTAGTTTGCTTTAGAAGGTAATTGGAATAGGCCTTTGGATTTTCTA
GTTTGCAGAAATGTGTAATAAAGGCAATTTTGTTATCTTTAACAAACACACAGAACAGATTAGAAT
GAGCCATTGGAGATGGGGGGTTGTTTTTACAGGAGCACGTGTGGGTGCGCACACTCCTGATGTCCA
GAGTTCAATGTGTGTTGCTAACCCTGTTTATTTCTGCTCCAGGCAGGGTCTCCATGAGCCTAGCCA
GTCTCTCAGCTCGTGGTCCTGCCTCCCTTGTTGCCCAAGTTTTGACGCCACAGGCTTGACAGCAAG
ATCTAGAAAATGCTTGTCTTGATTTTGTGTTTGTTCATGCTGTGTAATAAAAAGAACAATTGGTTG
ATGTATTCCTAAATTTAAAAAAAAAAAAAAAAGCACCAGGTGATGGTGGCTCACCCCTTTAATCCC
AACGCTCAGAAGGCAGAGACGGGTGGATCTCTGAATTCATGGCCAGCCAGGGCTACACAGCAAAAC
CCTGTCTTGAGAAAAGAGACTTGTGGGGTTGGGGATTTGGCTCAGTGGTAGAGCGCTTGCTACCCT
GGGTTCGGTCCCCAGCTCCGAAAAAAAGAATAGAAAAAAAAAGAAAAAAGAAAAAAGAGACTCGTA
AGCAAGCAAAGCTTGGTAGTCTAAAGAAATGAGAAATCCTTAGAGCTACCTTAGAGCTAGAAAAGG
CAGGACATTTCAGGCAGAGAGCTGGTACGGCAAGCCCAAAGGCTCAGGGCCCGGTTTATACCATGT
AAGGTTATCCTGAGGGGCTGGAGAAGAAATGCACAGCAACACTAACACGTCATACTGTCTGGCCAA
GTATCAACTACCATGGCTTTATAGATCCTGCTCTTGAGGAAAGGGGTAGATCAAGGGGTAATCAAG
GATAGATTACCCCTTTGGCAATAGGACGGAGGGTGGCTAGATCCCTCCAACAGTGTGAGTAGGTCC
AAGAGTATGAATCATCTATGGCTCCTAATAAACACTGCTAGGCTAATTTACCATTGAGCTACATCC
CAAATATCAAAAGTTGTTTTGGGAGAGGGGATGCATGGGAGACAGGTTCTAATGTGAATCTTACTG
TCCTGGAACTCCCTCCATAGACCGTGCTGGCTTTGAACTTACAGAGTTCTCACAGGAGACTTAACT
GCCTTTGTCTCCAAAGTGCTGGGATCAAAGGCGTGCACCACCACATCCAGCCTTATTTTAATTAAT
TATAATCAATTATTAATTAATTATAATCATAATTTTAATTAGTTTTGATCATATTTATCGATGTAT
TATGGAAGTGGGGCCTTGCATGTCATTCTTGTTGGTAAAGGTCAGGAGATAAAAATACTACTTGGT
AAATAAGAAAACCCAAGTTAAGAAAGATGGAGAAAAAAAAACAATATTATAGTTAAAAAAAAAAAA
ACTTGGTCTTTTAAAAATAAAATACAGGGGGCTGGGGATTTAGCTCAGTGGTAGAGCGCTTACCTA
GGAAGCACAAGGCCCTGGGTTCGGTCCCCAGCTCTGAAAAAAAGAACCAAAAAAAAAAAAAGAAAA
AAGAAAATACAGGGCTGGAGAGATGCTCAGCGGCTAAGAGCACTGACTGCTCTTCCAGAGGTCCTG
AGTTCAATTCCCAGCAACCACATGGTGGCTCACAACCATTTGTAATGGGATCTGATGCCCTCTTCT
GGTGTGTCTGAAGACAGCTACAGTGTACATGAATACATAAATAAATTCTTTAAAAAAATGAAAAAT
AAAATACATGTCATATGATTTATCAAAAAAAAAATACTACTTGGACAGGGTTGGAGATTTAGCTCA
GTGGCCGAGCACTTGCCTAGCAAGTGCAAGACCCTGGGTTCGGTCCTCAGCTCTGAAAAAAAAAAT
TACTACTTGGAGAAGTAGGTTCTCCCCTTCCACTCAAGTTGTAGAAATCCAACTTAGATGTCAGGA
GGCAAGCTCTCGTACCAACGGAACTTAAGATTTTGGTTTTTGAAGTCTTGTAGAGACCAGGCTATC
CTGAAATCAAGATTTAATTTACCCAGCTCCAAAAAAAAAAAAAAAAAGATTTAATTTAAAGTAGCTG
TTCCATGCCTTTGATCCCAGCACTCTGGACAAGAGAGGCAGATGCAGGTTGGTGTGTGAGTTTGAG
ATCAGTCTCAAAGCTTGGTCCACATGGAAAGTTCTAGAACAGCCAAGGCTTCATGAGATCGTGTCT
CAAAACAGCAAAGACAGTGACGATGACGTGATGATGATGAGCAACATAGACTCAAGCGTGCTAGGC

CAAAACACCACTAGATCTGCTCCCTAGCCCCTGACAAGTAATTTGCTAACAACATGCATAGTGGTT
ATTCTTCCAATTTCTCCTTCTCCTTCTCCTTCTCCTCCTTCTCCTTCTTCTTCTGTTTATTTATTT
ATGTGAGTACACTGTAGCTGTCCTCAGACACACCAGAAGAGGGCATCGGATCTCATTACAGATGGC
TGTGAGCCACCATGTGGTTGCTGGGATTTGAACTCAGGACCTCTGGAAGAGCAGTCAGTGCTCTTA
GCTGCTGAGCGTCTCTCCAGCCCCCAATTTCTTCTTTTAAAATTACATAATCACCACTAGGTGGGG
TGGCACATGCAGGCAGATCTCTGTGGGTTTGAGGTCTGCCTGGTCTTGGTATTGAGTTCCAGGTCA
GCCAGAGCTATATTCTGAGACCCTGTCTCAAAAAGACAGAAATAGAAGTAAAAAAGAAAACGGAAA
ATTAAAAAACACAGGGAGGCGGTGGTGACACACTTTGATCCCAGTACTGCATTTGGGAGGCAGAGG
CAGGTGGATCTCTTTGTATTACAGGCCAGCCTGGTCTACAGAGAATTCCAGGACATCAAGTACTAT
GCAGAGAAACTCTGTCTCAAAACACCAATAAACAAACAAACAAACAAACAAGTAAAAATAAATAAA
TAAAAATTAAAAAAGGAAAAGAAAAACGAAAAAGAAAGAAGAGAATAAAATTGTATTGCTTATCAT
GAATGCTCCAACTCGTGTGTTTAGGTCAGAAGACAACTAACAGGAATCCTTTTTTCTCTGGTATCA
AACTCGTGGGTCTTAGGAATCGAACTCACATACTTCGGTTGGGCGGCAAGCGATTTTACCCGCTGA
TCCATGACACAGGCCCTCTTTAATTTCTAAAGCCCTACATGCGGGTCTGGACTTTATTCACGGTGG
GTGGGTCTTCTTCCTGTCAGTTTCCGTCCGCAGATGTCCCCGCCCACCAGGAAGGATCTTTCGGGC
TCTCGTCGGCACCCGTCCACCCTGTCTCCACGTGACACAAACAGACAGGGCACTTCCGCTTCCCGT
CCACTCTCCTCACTCAGTGTCTACACCCCCCGTCCCCGGGTCCCCCGCCCGGTGAGTTAGCGAGCG
CCGGGAGGGCGGCGTCGCGGGCGGAGTCGCCCCGGGCTGACCCTTGCCGCCTTCCTTCTTCTCACC
GCAGGTCCCCGCGGTAGCGGAGGCGGGCGCCATGGCGGAGCTGACGGCTCTGGAGAGCCTCATCGA
GATGGGCTTTCCCAGGGGACGCGCGTAAGGGAACCTCCCCTCTAGCCTGTGGTGGGAGGCCGCGGG
CCTGCCGGGCCTCACTGTCACCATGGCTGGTGGGCGCTATTCACGGTGTTTCTGCCCTCAGGGAGA
AGGCTCTGGCCCTCACAGGGAACCAGGGCATCGAGGCTGCGATGGACTGGTGAGCGACTGGCACGG
GTGGAGGAAGTTTGGGGGCCTCTGGGAAAGGCGGCCTCAAGGCTAACCCCCTGCCAACTTTCTCTG
CCCAGGCTTATGGAGCATGAAGACGACCCCGATGTGGACGAGCCTCTAGAGACTCCTCTCAGCCAT
ATCCTGGGACGAGAACCCACGCCCTCAGAGCAAGTTGGTCCTGAAGGTCCTGACTGGGAGACATCT
TGTGATTCTAGCTATCTAGTGAGGGCCTGAGGAAACCAGAATGCTTTCACTATAAATAATAATACT
AGTTGCTTGTTTGTAGGATCTGGGTCTGCTGCTGGAGAAAGCAAACCCGTTTTGACTGAAGAGGAG
AGGCAAGAACAGACTAAGAGGTAACTGTGCAAGTTCAGTGTGTGTGTGTGTGTGTGTGTGTGTG
TGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTTTTGTTTGGAGCCTGCCTCACTCCTGTCCAGGC
TGAACTCTGGATCCTGCTGCCTCAGCCTCCAGAGTGCTGGGATTACAGGTCTTCACCACTGTGCCC
TGTATTATTTTTTGAGACAGGGTCTAGCTGTGTACCTCAGGCTGGCCTGGAACCTAGGCTAAATGC
AACGCCACATTCTTCTGAGTGTTGTGATCACCATAGCTAGCCCATTAACACACTTTCCCAAGGGTC
ATGGGTCATCTTCCTTTCTTCTCAAATACAAACACAAGTCAGGACAGACCTGGCCTTTCCAGTTAG
TGGATGTTGGGGGAGTCACCAGGAAACATCTCATACAGCACAAGACTGTCTAAACTCCTGCGTGGC
TGCAGACTCCCCTGAAATCCCAATTCTCTGGCCCCTACTTTGCAAGTGCAGGGACTGTAGGTATTC
ACCACCGTGCCTGGCTCTTGTCTGCCCTTTTTAAAAAAACAAAAAACAAAAAGGCCCCATGCATAA
TGTATGTGCTCTAACACTGAGCTACCTTTTTTTTTTTCTTTTGGTTTTGGTTTTGTTTTTTTCAAG
CCAGAGTCTGTCTCTATCCCCGCTGTCCTTAAACTGGCTCTATAGACCTGGCTGGACTGAAACTCA
AGAAATCCACCTGCCTCTGCCTTCTGAGCACTGAGGGGTGCACTGTCACCACCTAGCTTGCCCTTT
TTATGTTACTGTCTTGGCTTTGTTTTTTTTTTTCTTTTTTTTTTCTTTTTTTTGGAGCTGGGGACC
GAACCCAGGGCCTTGTGCTTGCTAGGTAAGCGCTCTACCATCGAGCTAAACCCCCAACCGGGCTTT
GTTTTCTTTTATCTGTCTTGGAACACAATCCTTTAATCTGTTAATTCTCTGTTTAAACTCACCTTC
CCACTCCATATCCAGCTTCAGCTTTTTCTTCTCTGCAAAACAGAATGTTGGAACTTGTGGCGCAGA
AGCAGCGGGAACGTGAAGAAAGAGAGGAGCGAGAAGCTTTAGAACGAGAGAAGCAGCGGAGGAGAC
AAGGGCAAGAGCTGTCAGCTGCACGACAGAAACTACAGGAAGATGAGATACGCCGGGCTGCTGAGG
AGCGCAGGAGGGAGAAGGCTGAAGAGCTAGCTGCCAGGTCTGAAGACTCATAGGTCACTAACGGAG
GAAGAAATGAAGACTTGCCTTGCCCATGTCTGACCTATCTTCCTCCTGTCTCTCTTCTAGACAAAG
GGGGCGAGAGAAAATTGAAAGGGACAAAGCAGAGAGAGCCCAGAAGGTGGGTGATGAGGAAGTCTG
TGGGTATAATGGAGTAGGGGGGTGCGGGGCCGTGGGGGCGTGCGGGCGAGGGGGGGGGGGGGGGC
GCGGGTGGGCGGGGGACGGAGAGGGGGCGGGGCAGGCGGGGGGGGGGCGCGGAGGTGCGGGGGGTT
TCTCACGGGTGGAGGAGGGGCGGGGGGGGGGGGAGGTGGGGTCGTGCGGTTGATGGTGCGGCGGGG
TTGATAGACGCCGTGCGAGTTGGCGGCGGGGGGCGGGCGGTGGAGGGGCGGCTGAGACGGGGGGCA

GGGGGTGCGTTGGGGGTGGAGGGCAGTGGGGCGGGTGCGGTTGCTGGCGCGGGCGGCGCGGAACGG
TAGCCGGGGCGCGCGGGAGCGCGCGCGCGCTCGCGAGGGGGTGCGGCCGGAGAGGGGTGCGGAG
GTCCGGTGAGCTGACTGACGATGCCCGGTAGCTGCTGGCGCGTGGGCGACGCGTCATGCCGTGGCG
CGGGTGGGGCGGGCGCGGTGCATGCGCGAGCGTCCTCGGTCTGGCGACCGTAGCGCGCTCTCTGTC
GGGGCCGCGGACCGGCGGTGAGGGTCGGGGGCGGGGGTGCGTGGTGGCTGGAAGGCGAGTGGTGTC
GGGTAGAGGGCGGCGATAGGGGGCGCGCGTGATGTGATAT